GUIDELINES FOR NEIGHBORHOOD TRAFFIC MANAGEMENT

City of Rockville
Department of Public Works
Traffic and Transportation Division

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Introduction

"Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."[1]

"Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds, and/or cut-through volumes, in the interest of street safety, livability, and other public purposes."[2]

Rockville has long been committed to the goal of maintaining livable residential neighborhoods. A major threat to that quality of life has been excessive speeds on residential streets creating an unsafe environment in Rockville neighborhoods, and excessive vehicular traffic, especially where neither the origin nor destination of traffic lie within the neighborhood. The transportation chapter of the City of Rockville's Master Plan outlines policies and recommendations for transportation in Rockville including: **Respect and protect neighborhoods especially from the impacts of regional traffic,** and, **minimize non-local traffic in neighborhoods.** These Guidelines for Neighborhood Traffic Management address this policy as outlined in the Master Plan.

Excessive traffic volume on residential streets is undesirable for several reasons. It is a danger to life, limb, and property. Excessive volume contributes to increased noise, vibration, air pollution, and visual intrusion. Additional traffic loads also hasten the deterioration of the streets themselves. There are several causes of increased volumes of non-neighborhood traffic using residential neighborhood streets, among them are congestion and delay on nearby arterial streets, commercial development in areas adjacent to neighborhoods, and residential street patterns that become convenient routes for through traffic.

To counter the effects of non-neighborhood traffic and excessive speeding, the Traffic and Transportation Division has developed strategies to divert or otherwise alter traffic flow through neighborhoods, as well as strategies to calm traffic and reduce speeds. Remedial measures to reduce traffic volume and speeds have proven to be generally successful, both in Rockville and in many other communities. Effective plans to control neighborhood traffic can create a safer, more pleasant residential environment. An added benefit of diversion techniques is that they reduce incidents of speeding at a proportion equal to or greater than the percentage reduction in traffic volumes.

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[1] Lockwood, I.M., "ITE Traffic Calming Definition," *ITE Journal*, Vol.67 (Washington, D.C.: Institute of Transportation Engineers, July 1997), pp. 22-24.

[2] Ewing, Reid, "Overview: Legal Aspects of Traffic Calming," Compendium of Reference Papers, 1998 ITE Annual Conference (Washington, D.C.: Institute of Transportation Engineers, 1998)

Streets in Rockville are classified as in the table below. Each classification of street serves a different function, and is therefore treated differently with regard to neighborhood traffic calming.

The maximum volume threshold for each neighborhood street classification is defined in the City's Master Plan. Neighborhood streets with volumes exceeding these thresholds are considered to have a volume problem.

Street Classification

Rockville Classification (Standard Term)	**Description**	**Typical Volumes**
Limited Access (Freeway)	Carries through traffic. Lanes are divided by a median. Access points are very limited.	50,000 to 250,000 vehicles per day
Major (Major Arterial)	Carries through traffic. Lanes are divided by a median. Access points are generally limited.	Greater than 25,000 vehicles per day
Arterial (Minor Arterial)	Carries through traffic. Design is more limited than on major streets. Access is less limited.	10,000 to 30,000 vehicles per day
Primary Residential – Class I (Major Collector)	Distributes traffic between neighborhoods and arterial streets. Typically has two traffic lanes.	Class I – In excess of 5,000 vehicles per day
Primary Residential- Class II (Minor Collector)	Distributes traffic between neighborhoods and arterial streets. Typically has two traffic lanes.	Class II – Less than 5,000 vehicles per day
Secondary Residential (Access)	Provides local access to residential properties. All non-primary streets are classified as secondary.	Up to 2,000 vehicles per day
Business District (Major/Minor Collector)	Serves adjacent business land use. Typically has four undivided traffic lanes.	5,000 to 20,000 vehicles per day
Primary Industrial (Major Collector)	Serves adjacent industrial and office land uses. Typically has four undivided traffic lanes.	5,000 to 20,000 vehicles per day
Secondary Industrial (Minor Collector)	Serves adjacent industrial and office land uses. Typically has two undivided traffic lanes.	Up to 2,000 vehicles per day

Scope of Guidelines and Relation to Other Policies

The purpose of these guidelines is to provide a uniform policy for implementing neighborhood traffic management plans in the City of Rockville. The scope of these guidelines is generally limited to the application of controls that divert non-neighborhood traffic around or past residential neighborhoods and devices used to calm traffic speeds on residential streets. The guidelines employ many of the concepts included in the neighborhood traffic policies of other local governments.

The primary source of the City's traffic control policies is the Manual on Uniform Traffic Control Devices (MUTCD), and engineering practices as outlined by the Institute of Transportation Engineers (ITE), the national standard for determining the selection and use of various traffic controls. Federal and State law requires City compliance with the mandatory aspects of the MUTCD, and the Manual's advisory aspects were adopted as City policy in 1989 in Mayor and Council Resolution 3-89. This resolution allows some flexibility in modifying the MUTCD's advisory standards, but is not intended to allow individual exceptions to these standards.

The MUTCD is silent on the subject of diversionary traffic controls to protect neighborhoods, and hence the need for these guidelines. The policies contained herein therefore supplement the MUTCD standards and replace traffic control policies previously established by the City (1991 Neighborhood Traffic Management Policy and Speed Hump Policy).

Available neighborhood traffic management strategies fall into two major categories:

1) Passive Controls (signs)

   a. Turn prohibitions (peak hour, daytime, 24 hour)
   b. Entry prohibitions (peak hour, daytime, 24 hour)
   c. One-way streets (24 hour only)
   d. Doubling fines (in school zones)
   e. Variable speed sign
   f. Warning signs

2) Physical Controls

   a. Diagonal diverters - barriers placed diagonally across a (4-way) intersection to prevent through movements and force turns
   b. Semi-diverters - barriers placed at one corner of an intersection to create a one-way entrance or exit. These can be used to augment entry prohibitions (i.e., DO NOT ENTER) or one-way streets
   c. Other intersection channelization - right turn only "plugs", median closures, "pork chops", etc. that discourage particular turning movements
   d. Traffic Circles

e. Speed Humps/Raised Crosswalks
f. Chicanes - “bump-out” of the curb that narrows the road, forcing cars to slow down
g. Road Narrowings/Chokers, Intersection Narrowings
h. Additional controls focusing on reducing vehicle speeds, in contrast to controls that address traffic volume

Physical controls are generally capital in nature, and are included in the Neighborhood Traffic Control Capital Improvements Program approved by the Mayor and Council. Projects that are large in nature and cost may require specific funding and approval by the Mayor and Council. Approval of funding, establishment of priority, and the design and construction of physical controls may involve considerable time in implementation, but ensures the best use of city funds.

Because these guidelines supplement other established policies, it follows that certain neighborhood traffic control elements are beyond the scope of this document. For example, the use of devices such as STOP signs and traffic signals are subject to MUTCD standards. Many other traffic controls typically used in neighborhoods, such as speed limit signs, are also the subject of existing standards beyond the scope of these guidelines.

Full street closures and/or abandonments require a special hearing process, including review by the Planning Commission and final approval by the Mayor and Council. This process is described in Chapter 21 of the Rockville City Code.

With the exception of abandonments, policies for traffic control on all city streets are administered by the Traffic and Transportation Division of the Department of Public Works. The Division is headed by the City's Chief of Traffic and Transportation, with general oversight from the Director of Public Works. Final authority for all traffic regulations on city streets, including those proposed under these guidelines, rests with the City Manager (Section 23-3, Rockville City Code). In addition, any traffic project requiring capital expenditure must be approved by the Mayor and Council. The City's Traffic and Transportation Commission develops and recommends traffic policies and standards for approval by the Mayor and Council, and for use by the Traffic and Transportation Division.

Eligibility for Traffic Diversion Plans

A particular street or group of streets can be considered for ***a traffic diversion plan*** when any of the minimum requirements contained in **Table A** are met. Only primary class II and secondary residential streets are eligible (a listing of these streets is available from the Traffic and Transportation Division).

TABLE A

Eligibility Criteria for Residential Traffic Diversion Plans

For secondary residential streets, any one of the following:

A minimum of:

a. 2,000 vehicles per day in both directions, or
b. 200 vehicles in any hour in both directions, or
c. 150 vehicles in any hour in one direction

For primary residential class II streets, any one of the following:

A minimum of:

a. 5,000 vehicles per day in both directions, or,
b. 500 vehicles in any hour in both directions, or,
c. 375 vehicles in any hour in one direction

Streets are ineligible for traffic diversion plans if:

a. Street is classified other than primary residential class II or secondary residential, including arterial streets passing through residential areas
b. Part of the residential street provides the primary access to commercial properties and alternate access is inadequate or infeasible
c. Street where a traffic diversion plan is already in effect
d. Street precluded by Master Plan, or other overriding City policy
e. Request for traffic diversion plan submitted within the last three years and did not meet City criteria or final plans were denied for implementation

Eligibility for Speed Control Plans

A particular residential street may be considered for ***speed-oriented controls*** if the requirements in **Table B** are met.

TABLE B

Eligibility Criteria for Residential Speed Control Plans

Streets will be considered for speed control only after passive controls or directed enforcement have been applied. Assuming that all other reasonable speed control strategies have been considered or exhausted, streets are eligible for physical speed control if the requirements below are met.

For secondary residential streets:

a. A minimum of 500 vehicles per day
b. 85th percentile speed exceeding the speed limit by 7 mph
c. Minimum segment length of 600 feet

For primary residential class II streets:

a. A minimum of 1,500 vehicles per day
b. 85th percentile speed exceeding the speed limit by 9 mph
c. Minimum segment length of 600 feet

For primary residential class I streets:

a. A minimum of 2000 vehicles per day
b. 85th percentile speed exceed the speed limit by 14 mph
c. Minimum segment length of 600'

Streets are ineligible for speed control devices if:

a. Street is classified other than primary or secondary residential, including arterial streets passing through residential areas
b. Street has a posted speed limit of less than 25 mph.
c. The street is used as a routine emergency service route or a major public transit route
d. The street is scheduled for resurfacing within the next two budget years. If all other criteria are met, street would immediately become eligible for speed control devices following the completion of resurfacing
e. Excessive traffic volume would be diverted to other residential streets
f. Request for speed control plan submitted within the last three years and did not meet City criteria or final plans were denied for implementation

Other considerations to be taken into account by the Traffic and Transportation Division include:

a. Curbs and gutters
b. Grade
c. Curvature of street
d. School bus route/transit routes
e. Adjacent arterials
f. Previous traffic engineering
g. Residences fronting on street
h. On-street parking
i. Sight distances
j. Safety considerations

Priority for Speed Control

Because funding for speed control devices is limited by an annual capital budget, it may not be possible for the City to construct all eligible projects. Candidate speed control projects must have their eligibility established by May 1 of each year for consideration in the annual program. In order for City staff to establish eligibility, formal citizen requests must be received by April 1. Requests received after April 1 will be considered for the following fiscal year. The City will rank eligible projects by descending order of the recorded 85th percentile speed, adjusted by adding the following factors:

Secondary residential streets:

$$\frac{V - 500}{100}$$ where V is the recorded average daily weekday traffic

Primary residential streets:

$$\frac{V - 1500}{100}$$ where V is the recorded average daily weekday traffic

[The adjustments above recognize higher traffic volumes as a secondary factor in determining project priority.]

The highest-ranking projects, up to the annual funding limit, will be funded during the budget year beginning July 1. Projects that were ranked as eligible for a fiscal year but not completed will remain at the top of the list for the next fiscal year. Staff may recommend priority adjustment to the Mayor and Council in order to move up new projects based on the severity of the problem. A project may be a candidate for no more than three years before its eligibility must be re-established. The City reserves the right to modify priorities

on the basis of factors such as the lack of pedestrian facilities or the presence of irresolvable visibility restrictions.

Should a request for a ranked project fail or, if agreement among City, local representatives, and neighborhood association (as appropriate) cannot be achieved, then the project will be dropped from the program and replaced by the next highest ranking project on the eligibility list. A project that fails for any reason may not re-apply for three years.

Implementation for Traffic Diversion Plans and Speed Control Plans

a) Request

A preliminary request containing signatures from at least ten households or 50% of the residences on the street, whichever is less, shall be required for the City to begin consideration of a traffic diversion or speed control plan. The City's Chief of Traffic and Transportation will acknowledge all requests in writing and will indicate the further eligibility of the street(s) under discussion.

The local civic association or citizen making the initial contact/request to the City, will serve as the point of contact for correspondence between the residents and City staff. For proposals having a major impact on area traffic patterns, the City Manager may also direct the participation of the City's Neighborhood Coordinators.

b) Traffic Studies

City staff will consult with other City departments to determine the affected area of the project. The Traffic and Transportation Division will define the affected area, and conduct studies including traffic volume counts and speed data collection on residential streets as needed. If eligibility criteria are satisfied for traffic diversion or speed control, the Traffic and Transportation Division may proceed with development of a preliminary concept plan. This development shall be performed in consultation with the applicant group's representatives and, where appropriate, the neighborhood civic association. Residents will be notified if the project does not meet the City criteria for traffic calming.

c) Concept

The Traffic and Transportation Division will develop a concept plan for neighborhood traffic calming to best fit the specific needs of the street and the surrounding neighborhood based on the data collected and considering other factors including:

- Curbs and gutters
- Grade
- Curvature of street
- School bus route/transit routes
- Adjacent arterials
- Previous traffic engineering

- Impacts to emergency services
- Residences fronting on street
- Sight distances
- Safety considerations

The Traffic and Transportation Division will also solicit input from area Fire and Rescue Services for proposed projects.

d) Impact of Traffic Diversion Plan or Speed Control Plan on Adjacent Streets
The Traffic and Transportation Division will take a comprehensive approach to the proposed project to determine the potential impacts of the proposed traffic calming plan upon streets adjacent to the neighborhood. The Traffic and Transportation Division will develop a comprehensive plan to address the needs of the entire affected area (as defined in step b). The Division may chose to incorporate additional elements to the plan if it is found that the plan will have an adverse affect on adjacent streets and neighborhoods.

If the diversion plan would require the installation of controls on State or County highways, the Traffic and Transportation Division will solicit the views of the State Highway Administration (SHA) and/or Montgomery County at this stage.

e) Public Process
The purpose of the public process described below is to get citizen feedback on a particular diversion or speed control plan at the concept plan stage. The outcome of the public process in no way obligates the City to proceed with, or discard the plan in question. It should be recognized that final authority for all traffic controls on City streets rests with the City Manager, and that the public process is therefore advisory to that authority.

The City shall select one of the following methods for soliciting public comment:

1. An informational notice outlining the traffic diversion or speed control concept plan shall be mailed by the City to all households within the affected area as defined in step b), soliciting input and requesting comments from residents. City staff and the City Manager will consider citizen comments before making a final decision on the traffic diversion or speed control plan.

2. A Public Meeting to solicit public opinion and comments on the traffic diversion or speed control plan.

Under both methods, notice shall be given to the neighborhood civic association, and the City Manager may consider comments from the association and any other interested parties before taking final action on the plan. All comments and opinions expressed during the public process will be considered advisory and final decisions will be made by

the City Manager. From the date that the public is notified of a final design, the official record will remain open for not less than 14 days and not to exceed 30 days.

For primary residential streets, a public meeting will generally be required to solicit public opinion and comment for a traffic diversion or speed control plan. Notice shall be provided to the local civic association, and any input from that group will be weighted in the City's determination as to whether to proceed with a particular traffic diversion or speed control plan. Notice shall also be given to adjacent civic associations, and the City Manager may consider comments from these associations and all other interested parties before taking final action on the plan. Wherever possible, the City encourages residents to discuss their concerns with their local civic association and have the association act as a point of contact.

f) Report

The Traffic and Transportation Division shall submit a report to the City Manager and the applicant group, and neighborhood civic association, where appropriate, summarizing the analysis and conclusions of steps b) through e) above.

g) Final Approval and Implementation

Following approval of the concept plan by the City Manager, the Mayor and Council shall be informed of the analysis and conclusions of the traffic management plan and the scope of the project. Staff will determine the budget and funding source for the project, either an existing CIP or a new CIP will be created to fund the project.

At the City Manager's direction, the Traffic Engineer shall prepare the necessary legal documentation ("Traffic Order") for approval. Plans controlling traffic movements to and from State or County highways also require approval from the State Highway Administration (SHA) and/or Montgomery County. Should the City Manager and SHA or Montgomery County (if applicable) approve, and if no capital authorization is involved, the Traffic and Transportation Division shall implement the plan.

If capital funding is required, implementation shall follow the Mayor and Council's authorization schedule, allowing time for engineering design as needed. SHA approval is also required where appropriate.

h) Revisions to Implemented Plans

An approved and installed traffic management plan may be considered for modification at the request of the affected residents, the neighborhood civic association, or as directed by the City Manager. Decisions on modifications shall be made in accordance with the implementation process outlined above. To prevent excessive use of its resources, however, removal or major modification of a diversion plan within two years of original implementation will be strongly discouraged by the City.